



# Lucitone Digital Print Denture New Denture Clinical Workflow

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# Workflow Overview

## Appointment One

- Evaluate the patient
- Capture the preliminary impression(s) using alginate or alginate substitute VPS material

## Laboratory Step One

Fabricate the baseplate(s) and wax rim(s)

## Appointment Two

- Border mold using VPS material
- Wash impression using VPS material
- Capture the plane of occlusion, lip support, vertical, and central incisor length
- Record measurement - “width on curve” or distance from distal-distal of canines and the midline
- Capture the bite registration
- Scan the bite registration and impression surfaces

## Laboratory Step Two

Design and print the try-in denture

## Appointment Three

- Insert and evaluate the printed try-in
- Evaluate the vertical, occlusion, midline, tooth length and record adjustments as needed
- Evaluate the fit - take a wash impression if necessary
- Capture the try-in bite registration
- Scan the bite registration (and the impression if taken)
- Notate criteria for re-printing the try-in denture or printing the final denture:
  - If the changes exceed 4mm reprint the try-in with the new adjustments
  - If the changes are 4mm or less, print the final denture

## Laboratory Step Three

Design and fabricate the final digital denture

## Appointment Four

- Insert and evaluate the final denture
- Verify the fit, vertical, occlusion, midline, and tooth length

# Chairside Materials



Fix Adhesive Tray Adhesive for Alginate Impression Materials



Blueprint® Xcreme Dust-Free Alginate Impression Material



Aquasil® Ultra+ Smart Wetting® Impression Material HEAVY Fast Set



Aquasil® Ultra+ Smart Wetting® Impression Material LV Fast Set



Aquasil® Ultra+ Smart Wetting® Impression Material XLV Fast Set

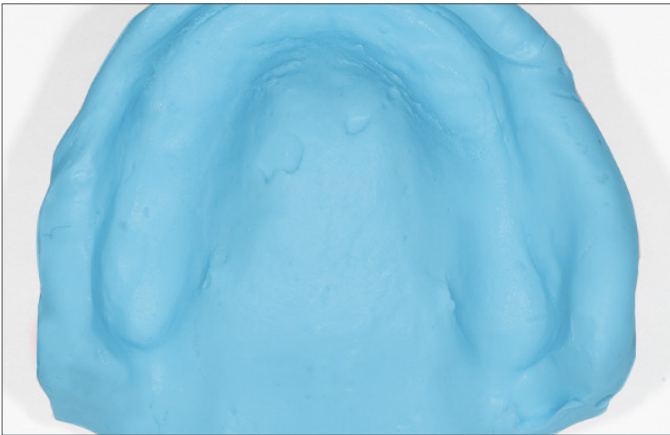


Aquasil Bite Vinyl Polysiloxane Bite Registration Material

## 1.0 Appointment One - *Evaluation & Preliminary Impressions*



Evaluate the patient.



Make the preliminary impression(s): First, fit the full-arch impression tray(s) to the patient - adjust as necessary to prevent tissue contact. Apply a thin layer of Fix Adhesive to the impression tray(s). Capture overextended impression(s) using Blueprint Xcreme Dust-Free Alginate Impression Material.

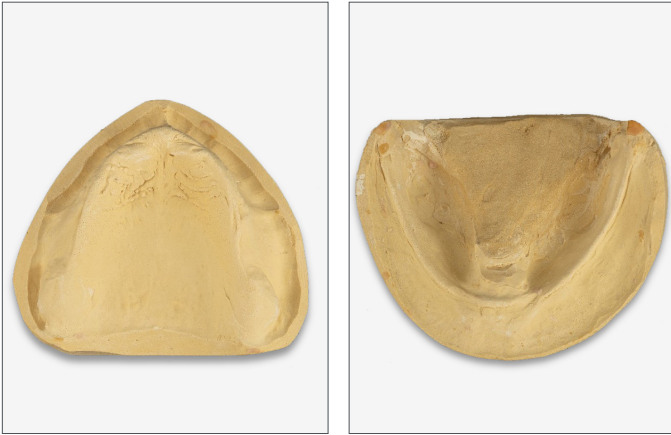
**The Maxillary Impression** must capture the entire vestibule and cover the tuberosities. Ensure the incisive papilla is visible.

**The Mandibular Impression** must capture the entire vestibule and cover the retromolar pads.



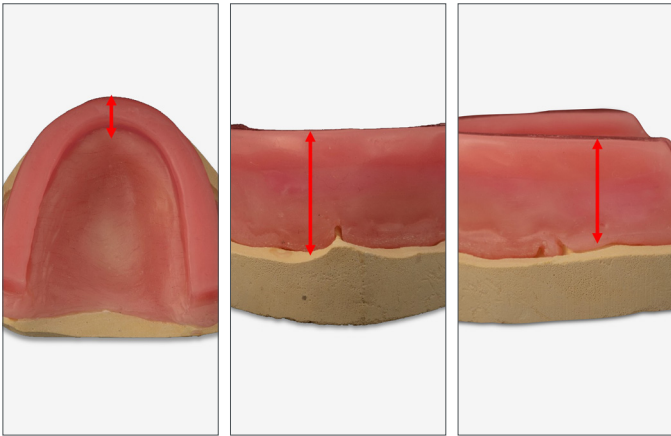
Evaluate the impression(s) ensuring thorough capture and visibility of all landmarks.

Follow proper disinfection protocols and send the impression(s) to the lab.



### Model Fabrication

The lab pours alginate impression model(s).



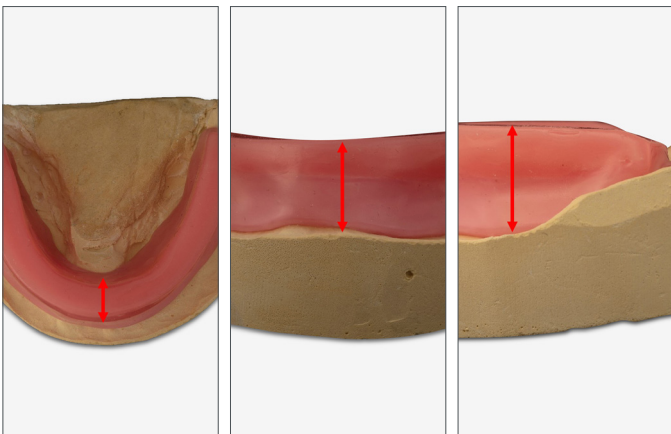
### Wax Rim Fabrication

Next, the lab fabricates the stabilized baseplate(s) with occlusal wax rim(s) per the following parameters:

#### Maxillary Arch

- Width of incisal edge: **3-4mm**.
- Height of the facial: **22mm** at the deepest section of the peripheral roll (usually on either side of the papilla).
- Height of the posterior rim: **18mm** around the location of the first molar.

The baseplate is now ready for use as a final impression tray.



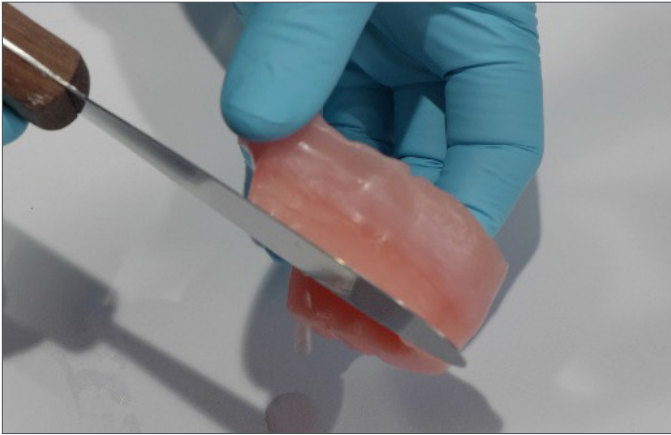
#### Mandibular Arch

- Width of incisal edge: **3-4mm**.
- Height of the facial: **18mm** around the deepest section of the peripheral roll.
- Height of the posterior rim: **18mm** around the location of the first molar.

Adjustment of the mandibular rim to extend  $\frac{2}{3}$  of the way up the retromolar pad area posteriorly.

The baseplate is now ready for use as a final impression tray.

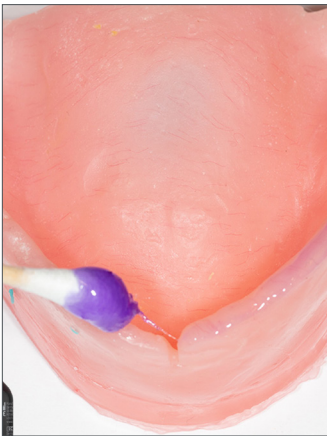
## 2.0 Appointment Two - *Final Impressions & Records*



### Assess & Adjust the Wax Rims

Prior to placement in the patient's mouth, follow proper disinfection protocols. Place the maxillary/mandibular baseplate with wax rim in the patient's mouth - one arch at a time. Adjust the rim(s) for the Vertical Dimension of Occlusion (VDO), as close as possible. Heat a spatula and melt the wax rim(s) as needed. The final VDO adjustment will occur after impressing.

The adjusted maxillary/mandibular baseplate with wax rim is now ready for use as a final impression tray.

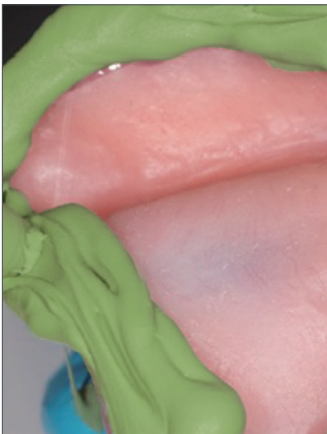


### Apply Tray Adhesive

Apply a thin layer of VPS tray adhesive to the borders using a disposable applicator - extend the tray adhesive to the cameo surface. The tray adhesive should be in a thin, even layer, free from pooling.

Use a gentle application of compressed air to help evaporate the solvent, as necessary.

**Apply Aquasil Ultra+ Smart Wetting Impression Material within 30 minutes of tray adhesive application.**

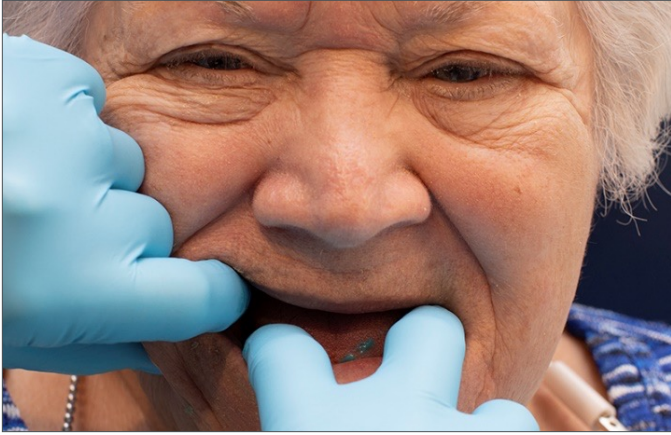


### Border Mold

Apply a bead of Aquasil Ultra+ Smart Wetting Impression Material HEAVY Fast Set to the maxillary/mandibular baseplate(s) covering all borders including the posterior.

**Aquasil Ultra+ has a bench working time of 60 seconds.**

- Total set time is 2 minutes 30 seconds (2:30).
- Use a timer for time adherence.



Seat the maxillary/mandibular baseplate(s).

**Provide patient instruction to complete the following steps:**

- Have the patient pucker their lips and hold for a few moments to capture the motion of the orbicularis oris.



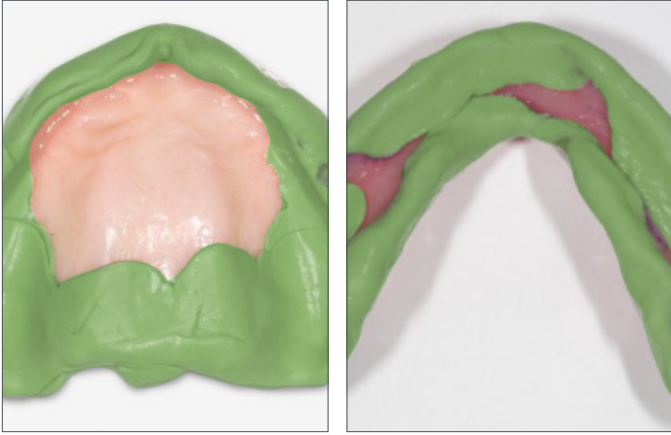
- Have the patient lick their lips, then move the tongue from side to side.
- Have the patient stick their tongue straight out.



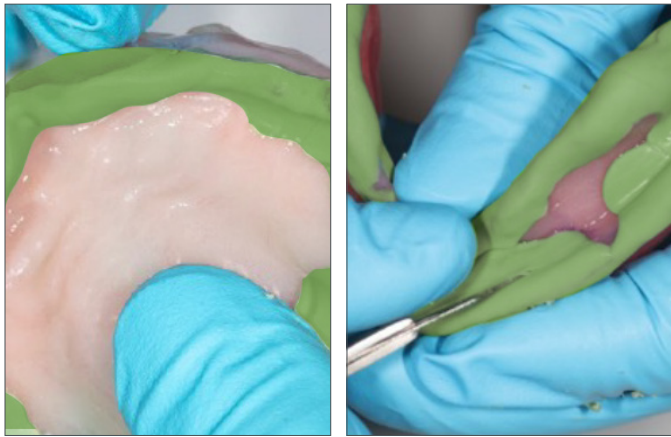
- Pull down the left and right cheeks to record the border rolls.
- Pull up the lip to record the anterior border.



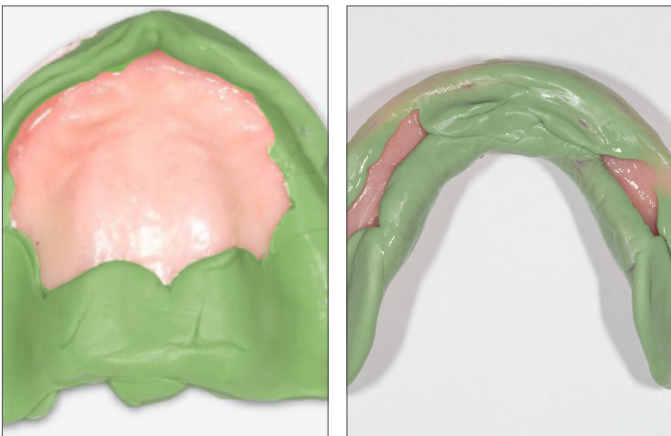
- Keep the baseplate(s) firmly seated on the alveolus until fully set: **2 minutes 30 seconds** from the start of the mix. Remove the baseplate(s) once fully set.



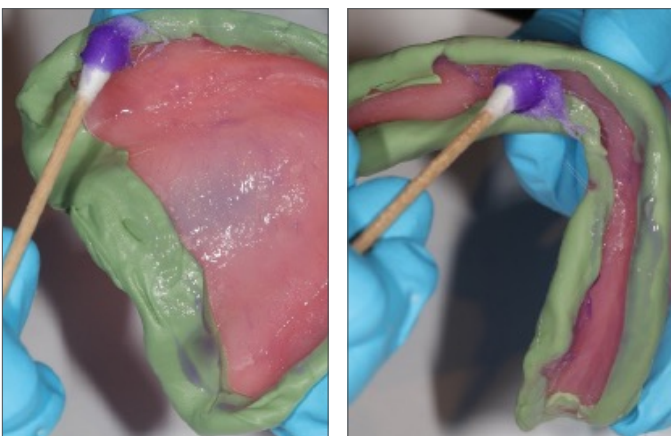
Complete border molding and posterior seal shown.



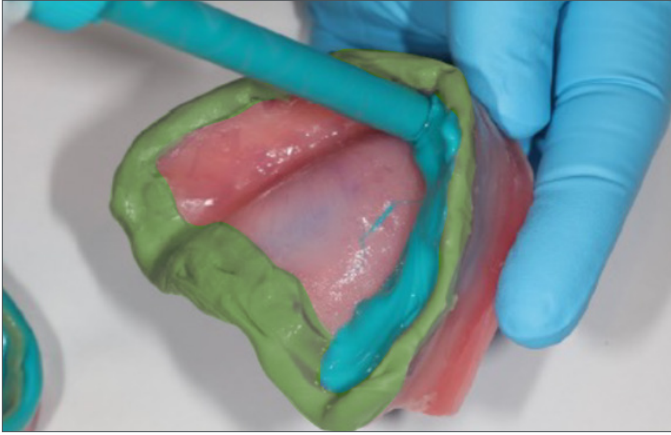
Trim excess material from the cameo surface maintaining the border roll.



Final border molding shown.



LV (Low Viscosity) Impression  
Apply a VPS tray adhesive to the baseplate(s).



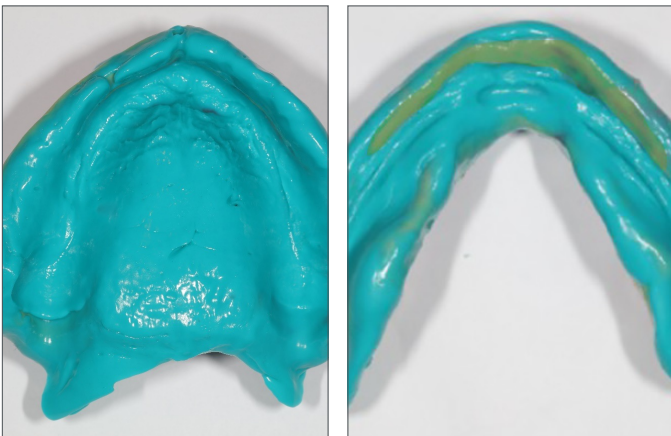
Apply Aquasil Ultra+ Smart Wetting Impression Material LV Fast Set to the intaglio surface of the maxillary/mandibular baseplate(s).

**Aquasil Ultra+ has a bench working time of 60 seconds.**

- Total set time is 2 minutes 30 seconds (2:30).
- Use a timer for time adherence.



Firmly re-seat the baseplate(s) and repeat the border molding movements. Maintain baseplate seating until the material sets.



A final maxillary and mandibular impression are shown. Note the well-formed borders and the complete capture of the anatomical landmarks.



### Plane of Occlusion Adjustment

Re-insert the impressed maxillary/mandibular baseplate(s) and wax rim(s).





Check the plane of occlusion using a device such as an occlusal plane plate.



Adjust the rim to be level with the interpupillary line.

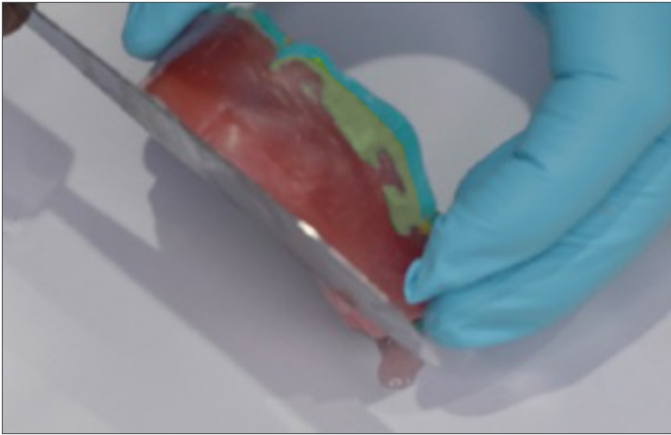


Adjust for Camper's plane.



### Incisal Edge at Repose Adjustment

Measure the wax rim display while the patient's lip is relaxed (at repose).



Adjust the rim for the desired length of the anterior tooth display.



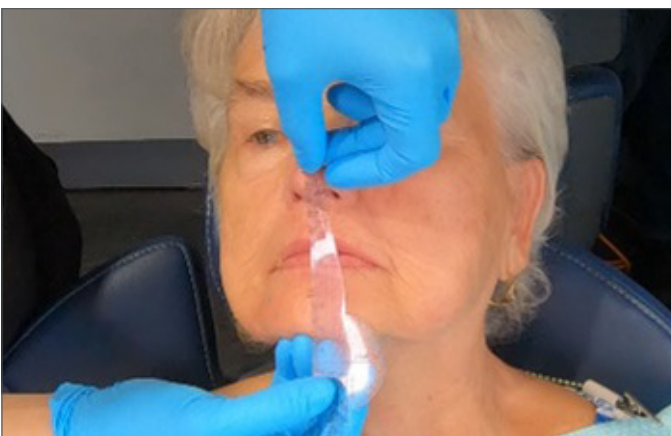
### Records

- Mark the midline
- Mark the high smile line
- Mark the distal position of the canines



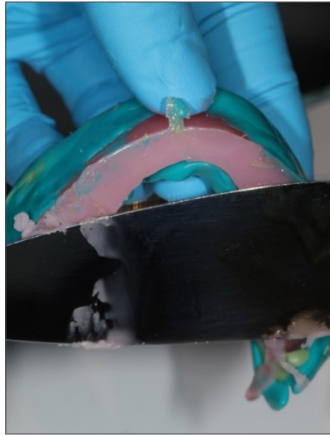
Insert the baseplate(s) and ask the patient to close lightly into centric.

Place a mark on the patient's nose and chin to establish the Vertical Dimension of Occlusion (VDO).



Using a ruler, take measurements of the markings on the patient's nose and chin.

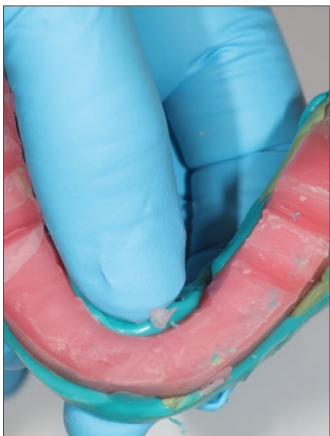
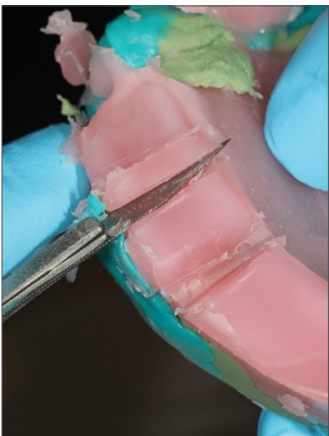
Determine if the VDO requires opening.



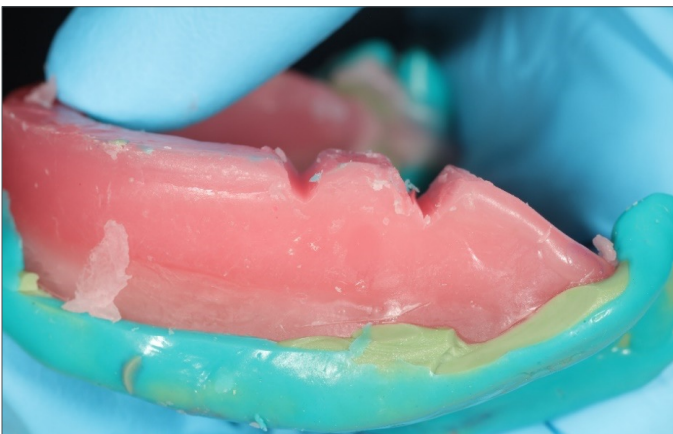
To adjust the VDO, first adjust the maxillary rim and then the mandibular rim as applicable.



Reinsert the wax rim(s) and verify the intended VDO measurements.



**Bite Registration Preparation**  
Notch the maxillary and mandibular rim(s) as shown.



Side profile view of the notch shown.



### Bite Registration Record

Work with the patient to establish a repeatable centric closure. Then apply Aquasil Bite Vinyl Polysiloxane Bite Registration Material to the occlusal surfaces of the bite rim. Close the patient into the practiced centric closure. Instruct the patient to maintain, or manually maintain jaw relationship without movement until **1 minute** from end of placement. Check material in the mouth (not on the bench) to be sure it is firm, resilient, and non-tacky before removal.

Work time	30 seconds minimum from the start of mix at 22°C
Minimum Removal Time (MRT)	1 minute from placement onto occlusal surfaces



### Bite Registration Verification

Check for complete posterior clearance and complete seating of the bite rim(s) into the registration material on both sides. Note: For a single arch, ensure the teeth completely seat with the opposing bite rim.



Prior to scanning, trim the excess registration material to visualize the interocclusal registration and the record markings. Follow proper disinfection protocols and send the impression(s) to the lab.



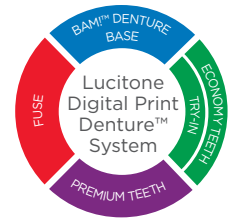
The Lab designs and prints the try-in denture arch(es). The Lucitone Digital Print Denture System utilizes a printed, monolithic try-in for the clinical evaluation of fit, function and esthetics.



### Lab Material

Utilize the *Rx Order Form* for the Lucitone Digital Try-In product selection - See 5.0 Resources.

- Lucitone Digital Value™ 3D Economy Tooth & Trial Placement



### 3.0 Appointment Three - *Try-In Evaluation*

Utilize the *Try-In Clinical Checklist* (See 5.0 Resources)



Disinfect the try-in denture arch(es) prior to placement in the patient's mouth. Seat the try-in arch(es) in the patient's mouth. Assess the fit, function and esthetics with the patient.



#### Evaluate and Document Adjustments

First, use articulating paper to identify any high spots on the posterior teeth.



Next, evaluate the following:

- Midline
- Incisal-edge position
- High smile line
- Determine if a cant exists

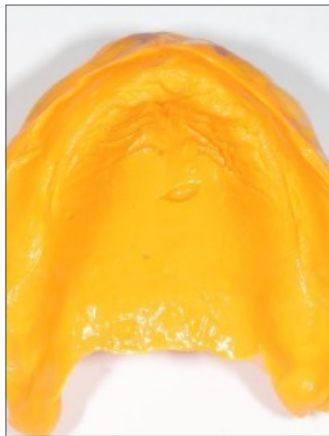
Remove the arch(es) from the patient's mouth. Use a marker or a bur to notate changes directly on the try-in arch(es).



Ensure the adjustment areas are clearly marked on the try-in arch(es).

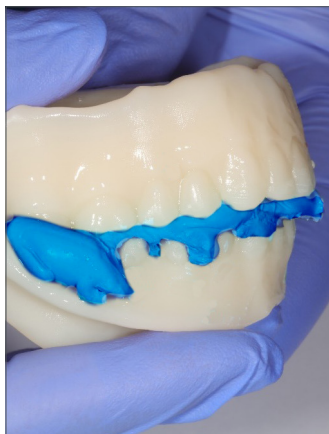
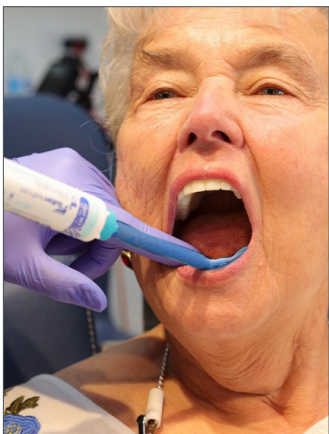


Use a carbide bur to adjust the try-in arch(es) and then clean the arch(es) to remove the debris. Reinsert the try-in arch(es) to check for proper occlusion. Repeat the adjustment steps as necessary to achieve proper occlusion.



If the fit of the try-in is not secure, use Aquasil Ultra+ Smart Wetting Impression Material XLV Fast Set to complete a wash impression, as shown.

If the fit is secure, move to the bite registration step.



To record bite adjustments take a new bite registration - see page 12 for step-by-step details.

Follow proper disinfection protocols and send the try-in arch(es) to the Lab for final denture fabrication.



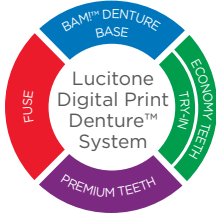
The lab designs, fabricates, and assembles the final denture arch(es).



### Lab Materials

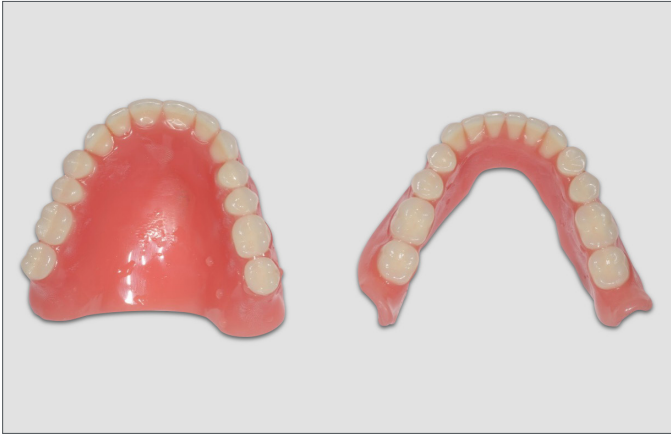
Utilize the *Rx Order Form* for the applicable digital material selections for the final denture - See 4.0 Resources.

- Lucitone Digital Print™ 3D Denture Base
- Lucitone Digital IPN™ 3D Premium Tooth
- IPN 3D™ Digital Denture Teeth
- Lucitone Digital Value™ 3D Economy Tooth & Trial Placement
- Lucitone Digital Fit™ Denture Disc
- DS Multilayer PMMA Disc





## 4.0 Appointment Four - *Final Placement & Evaluation*



Disinfect the denture arch(es) prior to placement in the patient's mouth.



Seat the denture arch(es) and evaluate the fit, function and esthetics.



Make spot adjustments to the occlusion, as necessary.  
Reseat the denture arch(es) and verify the adjustments.  
Confirm patient acceptance.



## Lucitone Digital Print Denture

Try-In Clinical Checklist *courtesy of Dr. Valerie McMillan, D.D.S.*

Patient Name: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Name: \_\_\_\_\_ Case Number: \_\_\_\_\_

### Overview

- The Try-In is an exact evaluation design of the final denture.
- Adjust and equilibrate the digital Try-In the same as a traditional final denture.
- Provide exacting adjustment instructions - expressed in millimeters of change.
- In addition to the checklist comments, if desired, write/express adjustment instructions in marker on the Try-In.

### Step-By-Step Checklist

1. Insert the Try-In in the patient's mouth and adjust sharp spots or pressure areas.

2. Does the Try-In have good retention? YES  NO

If No, re-impression the Try-In for new scans.

Comments: \_\_\_\_\_

3. Is the Vertical Dimension of Occlusion (VDO) correct? YES  NO

If No, adjust occlusion and make a new record.

Comments: \_\_\_\_\_

4. Are there areas of over-extension? YES  NO

If Yes, grind away any over-extension and send to the laboratory to scan.

Comments: \_\_\_\_\_

5. Is the midline in position? YES  NO

If No, left or right - indicate adjustment +/- in mm.

Comments: \_\_\_\_\_

6. Is the lip support adequate? YES  NO

If No, indicate facial or lingual - indicate adjustment +/- in mm.

Evaluate the upper teeth on the wet/dry line of the lower lip. Evaluate "SH" sound for lower teeth.

Comments: \_\_\_\_\_

7. Is the incisal edge position correct? YES  NO

If No, determine if teeth are too high or low - indicate adjustment +/- in mm. Check "F" and "V" sounds.

Comments: \_\_\_\_\_

8. Is there a cant? YES  NO

If Yes, provide teeth adjustment, left or right - indicate adjustment +/- in mm.

Comments: \_\_\_\_\_

9. From the view of the facial, are the cervicals of anterior teeth in proper placement? YES  NO

If No, lengthen or shorten - indicate adjustment +/- in mm.

Comments: \_\_\_\_\_

10. Is there a preference for the anterior tooth arrangement? YES  NO

Comments: \_\_\_\_\_

11. Select final Lucitone Digital Print™ 3D Denture Base shade:

Original  Original Opaque  Light  Light Reddish Pink  Dark Reddish Pink

12. Select final denture tooth shade: \_\_\_\_\_ (Select from 16 A-D\*, BL1, BL3)

13. Select characterization:

Rugae  Stipple  None  Other  \_\_\_\_\_

Return this checklist with the Try-In for noted adjustments and final design.

\*The A1-D4 designations correspond to the VITA classical A1-D4\* shade guide which is meant to be a guide, not a match. VITA classical A1-D4 is a registered trademark of VITA Zahnfabrik H. Rauter GmbH & Co.

# Lucitone Digital Print Denture Rx Order Form

Date: \_\_\_\_\_

## LAB INFORMATION

## OFFICE INFORMATION

Dr.: \_\_\_\_\_

Phone #: \_\_\_\_\_

Email: \_\_\_\_\_

### SHIPPING ADDRESS

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

**BILLING ADDRESS**  Same as above

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

## PATIENT INFORMATION

Name: \_\_\_\_\_

Age: \_\_\_\_\_  Male  Female

Patient number/internal reference: \_\_\_\_\_

## BRIEF TREATMENT DESCRIPTION (Please describe patient's classification)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## PRODUCT

	Upper	Lower
Lucitone Digital Try-In	<input type="checkbox"/>	<input type="checkbox"/>
Lucitone Digital Print Denture	<input type="checkbox"/>	<input type="checkbox"/>

Select appropriate patient scenario and follow checklist to ensure laboratory has proper records:

### Existing Denture Patient

- Existing denture with wash impression and bite registration
- Indicate any changes to the existing denture in notes section below
- Patient photos

### New Denture Patient

- Final impressions
- Bite rims with stabilized baseplates
- Mark mid-line, mark distal of cuspids and verify lip support
- Patient photos

## DENTURE SPECIFICATIONS

### Tooth Brand

Lucitone Digital IPN™  IPN 3D™   
DS Multilayer PMMA  Lucitone Digital Value™

### Occlusion

Balanced   
Lingualized

### Tooth Shade

16 A-D, BL1, BL3  
Specify: \_\_\_\_\_

### Base Shade

Original Light  Original Opaque   
Light Reddish Pink  Dark Reddish Pink

## WIDTH ON CURVE

\_\_\_\_\_mm  
Distal Canine-to-Distal Canine Measurement. (This measurement will be used to select proper mould size, particularly for new denture patients.)

## ADDITIONAL OPTIONS

	Upper	Lower	None
Stippling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rugae	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Follow impression vestibule anatomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name engraving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____			

## ORDER INFORMATION

Due Date: \_\_\_\_\_

## CLINICIAN SIGNATURE

\_\_\_\_\_

## NOTES

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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DP-0000586-EU Rev. 2 (06/2022)

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